NICARAGUA

LANCET COUNTDOWN ON HEALTH AND CLIMATE CHANGE
DATA SHEET 2026

Health and Climate Change in Nicaragua

Lancet Countdown on Health and Climate Change tracks the connections between health and climate change. In its tenth iteration, the 2026 Global Report shows that the health impacts of climate change have escalated, and frequently accelerated, in the decade since the Paris Agreement came into force. The Lancet Countdown Latin America tracks these links across the region, and its 2026 report provides the latest assessment of progress and challenges on health and climate change across Latin America.

This document draws on findings from both the 2026 Lancet Countdown Global Report and the forthcoming 2026 Lancet Countdown Latin America Report to present key insights for Nicaragua.

Increasing heat exposure is affecting vulnerable populations and workers in Nicaragua, with consequences for heat-related mortality, physical activity, labour capacity and livelihoods.

Environmental conditions remain highly suitable for dengue transmission in Nicaragua, while an expanding coastline suitable for *Vibrio* transmission poses additional risks to coastal health.

Household air pollution contributes to premature mortality in Nicaragua, while electricity accounts for a small share of household energy use and remains absent from road transport.

Nicaragua has substantially increased attention to health in its national climate commitments, while scientific research continues to examine the health impacts of climate change.

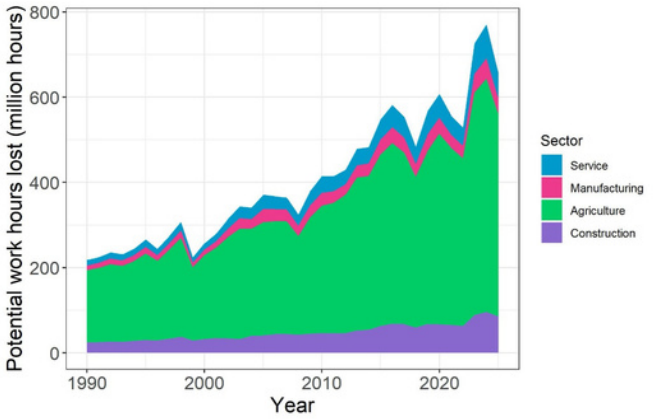
Heat and Health

Exposure to high temperatures increases the risk of heat-related illness and mortality. Vulnerable groups, including older adults, young children, pregnant women and those with pre-existing conditions, face the greatest risks. Heat can also limit safe physical activity and reduce people's capacity to work, with consequences for livelihoods.

Children under one year of age and adults over 65 in Nicaragua each experienced an average of approximately five heatwave days annually between 2016 and 2025, around four additional days per year compared with 2006–2015. **(Indicator 1.1.1)**

The average annual monetised value of heat-related mortality among people aged over 65 in Nicaragua was approximately US$105 million between 2021 and 2025, equivalent to approximately 6,000 average annual incomes. This was a 476% increase compared with 2000–2004. **(Indicator 4.1.2)**

Annual potential work hours lost, disaggregated by economic sector. Nicaragua, 1990 to 2025.



People in Nicaragua were exposed to over 2,860 hours annually in which heat posed a moderate or higher risk of heat stress during moderate outdoor physical activity (e.g., brisk walking) between 2016 and 2025, approximately 220 hours more than the annual average in the 1990s. **(Indicator 1.1.2)**

Heat exposure caused an average annual loss of approximately 604 million potential labour hours in Nicaragua between 2016 and 2025, 145% higher than the annual average in the 1990s. Agriculture accounted for approximately 73% of these losses. **(Indicator 1.1.3)**

Heat-related labour capacity reduction in Nicaragua caused an estimated potential earnings loss of US$1.2 billion in 2025, equivalent to approximately 5.8% of national GDP. Agriculture accounted for 54% of these losses, followed by construction and services at approximately 19% each. **(Indicator 4.1.3)**

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Climate-Sensitive Infectious Diseases

Changes in temperature, rainfall and coastal conditions can influence the environmental suitability for mosquito-borne and waterborne disease transmission. In Nicaragua, conditions remain highly favourable for dengue transmission, while expanding coastal suitability for *Vibrio* bacteria presents additional risks from infections associated with coastal waters and contaminated seafood.

The transmission potential (R_0) of dengue spread by *Aedes aegypti* mosquitoes in Nicaragua reached an average of 4 between 2016 and 2025, 28% higher than in 1951–1960. Transmission potential for *Aedes albopictus* also increased by 34%, reaching an average R_0 of 1.7 over the same period. **(Indicator 1.3.1)**

The length of Nicaragua's coastline with conditions suitable for *Vibrio* transmission increased by 482% compared with 1982–1991, reaching approximately 236 km in 2025.
Estimated vibriosis cases averaged approximately 1,570 annually between 2016 and 2025. **(Indicator 1.3.2)**

Energy Transition and Health

The use of polluting household and transport fuels contributes to harmful air pollution, increasing the risk of respiratory and cardiovascular diseases and premature mortality. According to the World Health Organization (WHO), Nicaragua's annual mean concentration of fine particulate matter ($PM_{2.5}$) was 16 μg/m³, more than three times the WHO annual guideline of 5 μg/m³. Expanding household and road transport electrification powered by renewable electricity can improve air quality, protect health and lower greenhouse gas emissions.

Household air pollution from the use of polluting fuels was associated with approximately 2,300 deaths in Nicaragua in 2023, compared with approximately 2,200 in 2016. **(Indicator 3.2.2)**

In 2023, electricity accounted for only 8.5% of household energy use in Nicaragua. Expanding household electrification, accompanied by expansion of renewable electricity, can reduce exposure to harmful household air pollution and its associated health risks. **(Indicator 3.1.2; Latin America Report)**

In 2023, no electricity use was recorded in Nicaragua's road transport sector. **(Indicator 3.1.3; Latin America Report)**

Renewable sources accounted for 31.9% of Nicaragua's electricity generation in 2023. Expanding renewable electricity generation can support electrification across households, transport and other sectors, reducing harmful air pollution from fuel combustion and protecting health. **(Indicator 3.1.1; Latin America Report)**

Health in Climate Policy and Research

Integrating health into national climate commitments and strengthening scientific research can support evidence-informed responses to climate-related health risks. In Nicaragua, health has gained greater prominence in national climate policy, while scientific research continues to examine the health impacts of climate change.

Health-related references in Nicaragua's nationally determined contributions (NDCs) increased from two in 2018 and six in 2020 to 36 in its 2025 submission, reflecting increased attention to health in national climate commitments. **(Indicator 5.4.1)**

Nicaragua's updated NDC (September 2025) addresses both the modernisation of hydrometeorological early warning services and the strengthening of the national health system, but as separate commitments rather than integrated climate services for health. **(Indicator 2.2.1; Latin America Report)**

An average of 11 scientific papers on climate change and health focused on Nicaragua annually between 2023 and 2025, increasing from 10 publications in 2023 to 14 in 2025. **(Indicator 5.3.1)**

Romanello M, Walawender M, Israelsson J et al. The 2026 report of the Lancet Countdown on health and climate change: A decade of escalating health harms and a decisive moment for all. The Lancet 2026; published online October 2026. https://doi.org/10.1016/S0140-6736(26)01779-4

Hartinger S, Llerena-Cayo C, Strappa V et al. The 2026 Lancet Countdown Latin on Health and Climate Change for Latin America. The Lancet Regional Health – Americas, 2026

The Lancet Countdown was established in partnership with Wellcome.
For further information, visit lancetcountdown.org

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10 YEARS LANCET COUNTDOWN: TRACKING PROGRESS ON HEALTH AND CLIMATE CHANGE
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